In re OREN ET AL., Application No. 10/042,836
Amendment A

Amendments to the Claims:

The listing of clams will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method comprising:

programming an associative memory with a plurality of sets of entries, each of the plurality of sets of entries associated with a different one of a plurality of unique decoder fields, and each entry within a particular one of the plurality of sets of entries including a same one of the plurality of unique decoder fields;

receiving a piece of information including a data item and a decoder value;

deriving a first lookup word including the data item and the decoder value; and

performing a lookup operation on the associative memory using the first lookup word to generate a first lookup result;

receiving a second piece of information including a data item and a nested condition indication;

identifying the nested condition; and

generating a plurality of lookup words in response to said identifying, each of the plurality of lookup words including the data item and one of a plurality of predetermined decoder values.

Claim 2 (original): The method of claim 1, wherein a first set of the plurality of sets of entries includes a different number of entries than a second set of the plurality of sets of entries.

Claim 3 (original): The method of claim 1, wherein the decoder value includes a set value and a subset value.

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Claim 4 (canceled)

Claim 5 (currently amended): A method comprising:

programming an associative memory with a plurality of sets of entries, each of the plurality of sets of entries including a different one of a plurality of unique decoder fields;

receiving a piece of information including a data item;

identifying a nested condition associated with the data item; and

in response to said identifying the nested condition, generating a plurality of lookup words with a predefined set of decoder fields of the plurality of unique decoder fields.

Claim 6 (original): The method of claim 5, wherein the piece of information includes a nested condition indication.

Claim 7 (original): The method of claim 5, wherein the piece of information does not include a nested condition indication.

Claim 8 (original): The method of claim 5, wherein at least two of the plurality of sets of entries have a different number of entries.

Claim 9 (currently amended): The method of claim 5, wherein each of the plurality of sets of entries has at least two entries.

Claim 10 (original): The method of claim 5, further comprising forwarding a lookup indication to a receiver.

Claim 11 (original): The method of claim 10, wherein the lookup indicator indicates the presence or absence of the nested condition.

Claim 12 (original): The method of claim 10, wherein the lookup indicator indicates a result context.

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Claim 13 (original): The method of claim 5, further comprising forwarding the plurality of lookup words to an associative memory.

Claim 14 (original): The method of claim 13, wherein the associative memory includes a ternary or binary content-addressable memory.

Claim 15 (original): A computer-readable memory containing computer-executable instructions for performing the method of claim 5.

Claim 16 (original): The method of claim 5, further comprising performing a lookup operation on each of the plurality of lookup words to generate a plurality of lookup results.

Claim 17 (original): The method of claim 16, further comprising comparing a first lookup result of the plurality of lookup results with a second lookup result of the plurality of lookup results to identify whether to perform processing based on the first or second lookup result.

Claims 18-19 (withdrawn)

Claim 20-26

Claim 27 (currently amended): An apparatus comprising:
        means for programming an associative memory with a plurality of sets of entries, each of the plurality of set of entries including a different one of a plurality of unique decoder fields;
        means for receiving a piece of information including a data item;
        means for identifying a nested condition associated with the data item; and
        means for generating in a plurality of lookup words with a predefined set of decoder fields of the plurality of unique decoder fields.

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Claim 28 (original): The apparatus of claim 27, wherein the piece of information includes a nested condition indication.

Claim 29 (original): The apparatus of claim 27, further comprising means for forwarding a lookup indication to a receiver.

Claim 30 (original): The apparatus of claim 29, wherein the lookup indicator indicates the presence or absence of the nested condition.

Claim 31 (original): The apparatus of claim 27, further comprising associative memory means for receiving the plurality of lookup words and for generating a plurality of lookup results.

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